

# **Serious Case Reviews in England: An Analysis of Risk Factors for Intra-familial Child Maltreatment**

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## **Abstract**

Intra-familial Child Maltreatment (ICM) is prevalent around the world and leads to significant long term effects. Many risk factors have been identified in relation to ICM and have been shown to be influential upon each other, therefore, considering risk factors together rather than in isolation may be beneficial. Following Bronfenbrenner's (1979) ecological systems theory, the current study attempted to classify risk factors into themes of Child, Parent and Family. To do this, 115 Serious Case Reviews were analysed for the presence/absence of fifteen risk factors taken from the literature. To categorise the risk factors, a Smallest Space Analysis was performed to produce an overall structure dependent on the relationship between each risk factor and every other risk factor. It was found that the risk factors fit into these three themes. In addition, over 70% of the cases could be further classified into a dominant theme, with Parent and Family themes most frequent. A Parent-Family hybrid theme was also highly prevalent. These results support the conclusions made by other studies that ICM should be looked at within a child's environment (such as Dubowitz et al., 2011). Overall, the model of this study could inform future work regarding the early identification of risk to ensure the safeguarding of children at risk of ICM.

## **Introduction**

Intra-familial Child Maltreatment (ICM) is defined in this report as the maltreatment of an individual under the age of 18 perpetrated by a member of their family (i.e. a parent, step-parent/parent's partner, grandparent, uncle or aunt). Child maltreatment includes four types of negative childcare behaviours; physical abuse, emotional abuse, sexual abuse (Jutte et al., 2015) and neglect. These practices are composed of a collection of various different behaviours, for example, physical abuse includes the striking or induction of illnesses in a child, emotional abuse includes making the child feel worthless or allowing them to witness the abuse of another family member and sexual abuse describes both physical and non-physical sexual behaviour with a child.

Furthermore, neglect describes the child's necessary needs not being met (Haynes, Cuthbert, Gardner, Telford & Hodson, 2015) and is a common reason for a child to be made the subject of a Child Protection Plan (CPP). According to the Department for Education (DfE; 2015) on the 31st March 2015, 62,200 children were the subject of a CPP. However, registration greatly

underestimates the true prevalence of child maltreatment (Sidebotham & Heron, 2006), as self-report methods have produced rates 7-17 times larger than official rates in the UK (Radford, Corral, Bradley & Fisher, 2013). These variations in prevalence rates may be the result of methodological issues (Bertolli, Morgenstern & Sorenson, 1995; Kinard, 1994; Thornberry & Henry, 2013) and variations in the treatment and response of ICM between countries (Stoltenborgh, Bakermans-Kranenburg, Alink & van Ijzendoorn 2015). World-wide, prevalence rates for child maltreatment was found to be 12.70% to 36.60%, depending on the type, with sex abuse the lowest prevailing and physical abuse the highest (Stoltenborgh et al., 2015). Investigations into the prevalence of childhood maltreatment estimate between 10% and 25% of respondents in the UK report ICM (May-Chahal & Cawson, 2005; Radford et al. 2011).

Variations on the prevalence of ICM may also be impacted by the thresholds and assessments across different agencies. Lewin and Herron (2007) found that health visitors ranked some risk factors as not important in identifying maltreatment, despite their link to ICM. Detection of these risk factors through rigorous scientific models is crucial as they can attenuate a parent's capability to appropriately care for their child (Hornor, 2014). ICM has been found to have detrimental effects later in life, such as an increased risk of suicide (Hoertel et al., 2015), thus the early identification and response to at-risk parents/families is important for a proactive, preventative approach.

Often the focus of ICM is on the perpetrator and problems occurred within their own relationship with their partner, and/or negative experiences pre and post birth. In a variety of studies low birth weight and prematurity, defined as a birth weight lower than 2500 grams and a gestational age less than 37 weeks (Spencer, Wallace, Sundrum, Bacchus & Logan, 2006) have been found to increase registration on the child protection register (Sidebotham & Heron, 2006; Spencer et al. 2006). Spencer et al. (2006) speculated that these infants may incite negative and hostile feelings in the parents due to disrupted bonding. Following this pattern of broken bonds and attachments post birth, any undesirable behaviours exhibited by the child may also disrupt bonding and lead to maladaptive parenting (McEiroy & Rodriguez, 2008; Thornberry et al, 2014). Hurme, Alanko, Anttila, Juven and Svedstrom (2008) looked at these behaviours and found that excessive crying increased the likelihood of physical abuse. Extending on this finding, Jaudes and Mackey-Bilaver (2008) found that behavioural problems significantly increased the likelihood of ICM. The children in their sample exhibiting either behavioural or health problems were up to twice as likely to be victims of ICM as compared to children without behaviour/health problems. Similarly, Mueller-Johnson, Eisner and Osbuth (2014) found that boys with physical disabilities were more likely to be a victim of contact and non-contact sexual abuse when compared to able bodied male children, however, there was no effect with female children. The authors concluded that children with disabilities may be targeted for maltreatment perpetration.

When examining perpetrator factors, alcohol and drug abuse have been consistently shown to be associated with ICM, especially repeated maltreatment (Hurme et al., 2008; Laslett, Room, Dietze & Ferris, 2012). Hurme et al. (2008) found that the presence of the previously mentioned child risk factors increased alongside parental alcohol and drug use. The interaction between behavioural issues in children and substance misuse would be difficult to untangle, as substance misuse could lead to increased behavioural problems in the child who may search for attention and affection, conversely, the parent may result to increased substance misuse to cope with already established behavioural problems with the child (for example if experienced a difficult birth/health issues). Regardless, there is much evidence to suggest a correlation between substance misuse and

increased likelihood of child maltreatment, as found within the longitudinal study by Sidebotham and Golding (2001).

Previous offending behaviour has been linked to ICM (Cavanagh, Dobash & Dobash, 2007) and is deemed as a parental risk factor by the World Health Organisation (2014). Aggressive households, or households with a history of offending may lead to the parents developing cognitive schemas that allow them to use aggression towards their child (McEiroy & Rodriguez. 2008). As found consistently across various offence types, parents who were victimized during childhood themselves showed a higher incidence of ICM perpetration (Geiger & Schelbe, 2014; Plant. Barker. Waters. Pawlby & Pariante. 2013; Sidebotham & Heron, 2006; Thornberry & Henry, 2013). A possible pathway of this likelihood is through a cultural transmission of negative care practices (Abramovait, Bandyopadhyay & Dixon, 2015). This pathway is supported by Seto, Babchishin, Pullman and McPhail (2015) who established that intra-familial sex offenders had a higher prevalence of child sex abuse than extra-familial sex offenders. Parents who themselves have been maltreated may see this as an appropriate way to interact with their children and these behaviours are a part of their "parent schema". Despite this, 77% (Thornberry & Henry, 2013) and 98% (Sidebotham & Golding, 2001) of parents who reported maltreatment in their childhood in the respective samples did not go on to maltreat their children, therefore, it is likely to be the interaction with other factors alongside previous history that may increase likelihood of ICM.

Other factors such as mental health issues have been found to be associated with ICM (Plant et al., 2013; Sidebotham & Heron, 2006; Whitson, Martinez, Ayala & Kaufman, 2011), with age of parents likely to be interacting with this finding, as Bartlett et al. (2014) found mental health issues linked to infant neglect, with the average age of their sample 18.6 years. Young parents may lack the experience and awareness to identify the child's needs (Sidebotham & Golding, 2001). On the child protection register, Sidebotham and Golding (2001) found 26.60% of mothers and 8.60% of fathers of registered children were younger than 20, higher than the general population prevalence of 4.80% and 1.10%, respectively. This could indicate that parents who are younger than 20 are at an increased risk of ICM perpetration. Whitson et al. (2011) investigated a sample of adolescent mothers, finding that higher child abuse scores were preceded by higher levels of depression. Geiger and Schelbe (2014) emphasised the need for policies aiding adolescents who are parents, especially when ageing out of the foster care system, as possible maltreatment history may interact with the effects of being a young parent, leading to compromised parenting ability.

Other external factors within the relationship and daily living have been found to negatively influence the care of children, with financial troubles being one of the key factors (Hornor, 2014) as food and other essential items may not be affordable. The inability to cope financially may impact on stress levels within the household, again impacting on increased impulsivity and aggression towards children and family members (Ha, Collins & Martino, 2015). In both a US (Li et al., 2011) and a British sample (Sidebotham & Heron, 2006), it was found that financial stress increased the likelihood of an allegation of maltreatment, particularly in foster children (McGuinness & Schneider, 2007). Moreover, high house mobility, described as three moves in the previous five years, was linked to ICM (Sidebotham, Heron & Golding, 2002). Supporting this, Bartlett et al. (2014) noted that 54% of their sample had relocated at least once in the past year. Linked with this, inadequate living conditions have also been shown to be a risk factor of intra- familial child homicides (McManus, Almond, Rhodes & Brian, 2015) and so may increase the risk of ICM. As well as this, poor hygiene can be viewed as a form of neglect that increases the risk of other forms of ICM (Hornor, 2014). Keene, Skelton, Day, Munyombwe and Balmer (2015) found that children on a CPP had higher tooth decay

that non-CPP children. This research suggests that ICM is associated with both poor hygiene and living conditions.

Violence within the family can also increase the risk of ICM (Bartlett et al., 2014). Researchers suggest that domestic violence alongside ICM should be seen within the context of family violence (Schwartz, Preer, McKeag & Newton, 2014). Also, the Department of Education (DfE) (2016) found that domestic abuse, alongside mental health, was the most common factor identified in almost half of all instances of ICM. Another risk factor relating to family stress is family size, concerning the number of children within a family. Zuravin (1991) found that an increase in family size relates to an increase in stress which then leads to maltreatment. This is supported by Sidebotham and Heron (2006) who found a correlation between larger family size and an increase in ICM perpetration.

Furthermore, lack of support may occur alongside these as a risk factor for ICM (Sidebotham et al., 2002). In other studies, social support is seen as a protective factor and could provide an explanation as to why some children with the same risk factors are maltreated and others are not (Li et al., 2011). Parents who report having social support show significantly lower child abuse scores (Whitson et al., 2011), possibly due to the mediating effect support has upon the intensity of other risk factors (Li et al., 2011). The lack of this protective factor may contribute to the risk of ICM, thus becoming a risk factor.

A common theme in research pertaining to risk factors of ICM is the cumulative impact risk factors have upon each other (Thornberry et al., 2014). Brown, Cohen, Johnson and Salzinger (1998) found an increase in prevalence of ICM from 3% to almost 25% when multiple risk factors were present, predicting low, medium or high risk when combined (Lewin & Herron, 2007). Therefore, the combination of risk factors into overarching themes may have an advantage, rather than examining risk factors in isolation. For example, McManus et al. (2015) combined the risk factors for intra-familial child homicides into related components to explore which factors co-occur. Police reports across England and Wales were used to assess the presence/absence of risk factors in 100 cases. These risk factors were then analysed to create 'risk conditions' suggestive of the risk factors involved. From this, four conditions that identified different types of behaviour seen in child homicides were revealed: 'Abusive and Unstable Households', 'Parental Social Issues', 'Neglectful Parenting' and 'Multiple Stressors'.

Another way to group risk factors, is to use an ecological approach (Belsky, 1993; Haynes et al., 2015; Stith et al., 2009). Bronfenbrenner's (1979) ecological model of child development sees the child at the centre of multiple systems that affect each other to create the child's experiences. By using this approach to research ICM, the focus is upon the sufficient conditions that lead to ICM in psychologically healthy individuals rather than relying on possible psychopathological explanations (Garbarino, 1977). Previous researchers have used this model to categorise risk factors, reflecting child, mother/parent and family risk factors (Bartlett et al., 2014; Brown et al., 1998; WHO, 2014). Dubowitz et al. (2011) concluded that, using this approach, ICM could be predicted at each level of a child's ecological system. However, their sample was dominantly African-American, thus the applicability of these results would need to be more widely tested.

Effective preventative policies (Gilbert et al., 2012) and predictive models are needed to identify ICM. The use of identifying risk factors and placing them into an applicable framework is an example of predictive risk modelling (De Haan & Connolly, 2014). These models are beneficial as they can be used to complement universal services in the prevention of maltreatment. This "forensically orientated child protection" (De Haan & Connolly, 2014, p.89) would be based upon statistically backed, empirical models. Despite studies looking at risk factors in relation to ecological

themes, none have sought to statistically place them. Serious Case Reviews (SCRs) have been used in previous research (Brandon, Bailey, Belderson & Larson, 2014; Woodman et al., 2011) and are reports initiated when a child has experienced serious harm or died and maltreatment is suspected to be involved (NSPCC, 2016). They are specific to England and aim to provide lessons to understand why the maltreatment has occurred and how to prevent it from happening again (Sidebotham, 2012).

Like Li et al. (2011), the current study combined abuse and neglect into "child maltreatment" and aimed to identify specific risk factors associated with ICM within SCRs. From this, it was investigated whether themes could be derived from the relationship between risk factors. It was hypothesised that the risk factors from the literature could be classified into specific themes reflecting Bronfenbrenner's (1979) ecological systems. It was also hypothesised that the individual SCRs could be further classified into dominant themes depending on the prevalence of the risk factors within them.

## **Method**

### **Sample**

A total of 206 SCRs were examined, of which were published during 2013- 2015 and available on the NSPCC website before March 2016. However, since the aim of the study was looking at ICM in England, 75 were ultimately excluded from the analysis for not satisfying these conditions. Following this, 16 cases were then excluded as they involved a Sudden Unexpected Death of an Infant (SUDI) and cause of death was not attributed to ICM, or due to the lack of any risk factors. This left a final total of 115 SCRs.

From these, there were 164 suspects and 147 victims of ICM. Due to some cases having multiple suspects and/or multiple victims, cases were analysed singularly and risk factors were recorded by case rather than an individual victim/suspect basis. Throughout this report "suspect" will denote those who were deemed responsible for the cause of ICM in the SCRs, regardless of whether they had been formally charged or not. Abuse was present in 62.61% of cases and there was evidence of neglect in 18.26% cases. In 64.35% of cases, there was at least one fatality. Missing data and different levels of anonymising did not allow full demographics to be taken from each review. Therefore, ages were recorded in categories (Tables 1 and 2). Victims ranged from hours to 16 years old with victims most likely to be aged between one and three years old, particularly for male victims, closely followed by being less than three months. The majority of the victims were male, although, almost a quarter of the victim's gender were not revealed. Of the ICM cases, 83.47% were focused on only one victim.

Table 1. Age and Gender of Victims

Age	Gender (%)			Total (%)
	Female	Male	Missing	
< 3 months	10	7	8	25 (17.01)
3-6 months	5	12	1	18 (12.24)
6-9 months	2	2	2	5 (3.40)
9-12 months	2	3	1	6 (4.08)
1-3 years	8	16	6	30 (20.41)
3-6 years	6	9	1	16 (10.88)
6-12 years	3	7	0	10 (6.80)
12-18 years	2	2	1	5 (3.40)
Missing	8	9	15	32 (21.77)
Total	46 (31.29)	67 (45.58)	34 (23.13)	

As can be seen from Table 2, all suspects had their gender recorded, revealing that the number of males and females were almost equal. Conversely, ages were not revealed in almost half of the cases. Known ages ranged from 16 to 60 years and "Less than 20" was the most common age category. Of the 115 cases, 60.87% included only one suspect.

Table 2. Age and Gender of Suspects

Age	Gender		Total (%)
	Female	Male	
Less than 20	11	8	19 (11.59)
20-30	26	15	41 (25)
30-40	7	7	14 (8.54)
40-50	2	5	7 (4.27)
Over 50	1	2	3 (1.83)
Missing	33	47	80 (48.78)
Total	80 (48.78)	84 (51.22)	

White British was the most common ethnicity for both victims and suspects, with around 45% each. This figure is greatly different from official statistics which state that 86% of the population of England and Wales in 2012 identified as White British (Office for National Statistics, 2012). However, a large percentage of cases for both victims (37%) and suspects (35%) did not record ethnicity.

The biological mother was recorded as the suspect for almost half of the total suspects, followed by the biological father in almost a third., see Table 3. In 70.43% of cases, the mother was one of the suspects and in 49.57% of cases, either the stepfather or the mother's partner was involved.

Table 3. Suspects Split by Relationship to Victim

Relationship	Number	%
Mother	79	48.17
Father	51	31.10
Mother's Partner / Stepfather	27	16.46
(Step) Grandparents	3	1.83
Extended Family	3	1.83
Uncle	1	0.61

### Procedure

From the literature, 15 mutually exclusive risk factors for ICM were identified and used in this investigation. These risk factors included behaviours and characteristics of the subject child/children, the suspects and the family environment. A coding dictionary was created by the researcher to guide data collection (Table 4). Using the 15 variables identified, the content of the SCRs were analysed to determine if the risk factors were present. To do this, a dichotomous approach of yes/no dictating presence/absence was employed, as seen in McManus et al. (2015). The use of a dichotomous scale had been previously shown to be reliable (Almond, McManus & Ward, 2014; Canter & Heritage, 1990) in research with large amounts of missing data. To assess inter-rater reliability, an independent observer analysed nine SCR's, three selected from each year. This resulted in a Cohen's kappa of .903,  $p < .001$  and demonstrates an almost perfect agreement.

### Analysis

A Smallest Space Analysis was used to assess underlying structures in the data by examining the correlations between each risk factor and every other risk factor to create an overall structure (Lingoes. 1973). This results in a figure where the variables correlations have been rank ordered, leading to a graphical representation of the relationships between the risk factors. When the points on the figure are closer together, this is indicative of them frequently co-occurring.

This study was archival in design and, due to the nature of SCRs, the data was anonymous secondary data in the public domain. As this data was not collected for research purposes, Jaccard's coefficient was used and has been deemed by previous research (Canter, Bennell, Alison & Reddy, 2003) to be the most appropriate measure in cases where variables may be present, but have not been recorded. For dichotomous data, Kuder- Richardson 20 coefficient (K-R 20) was used instead of Cronbach's alpha and measured internal reliability.

Table 4. Themes and Variables

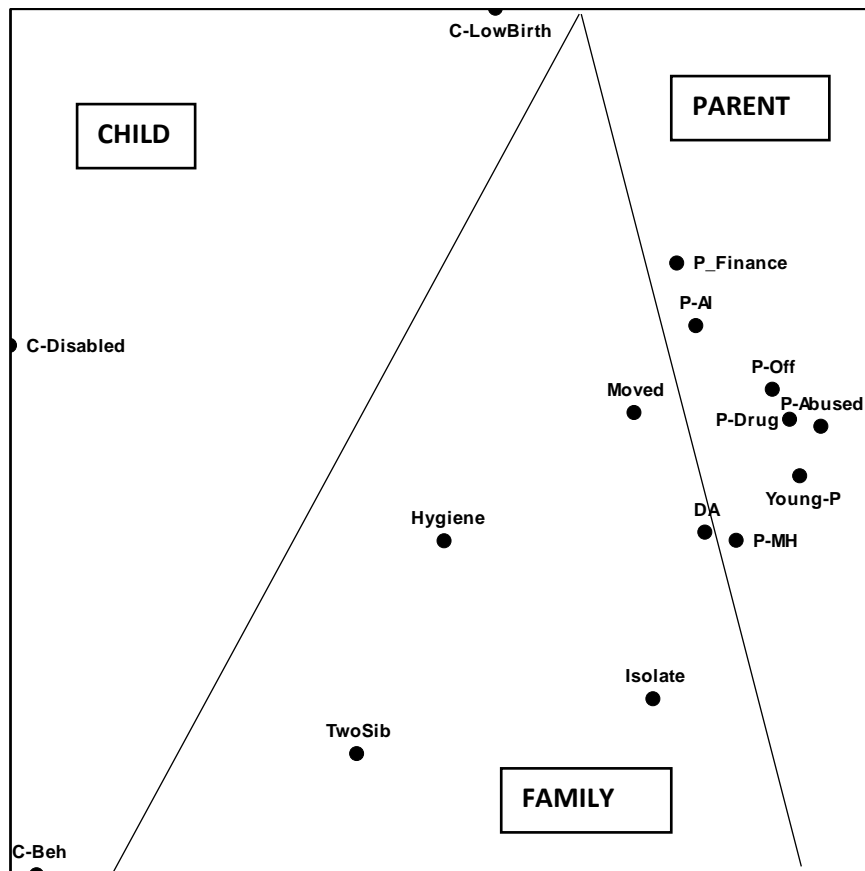
Theme	Label	Explanation	Frequency (%)
Child	LBWP	Child had a low birth weight/was born prematurely	18 (15.65)
	DSMC	Child was disabled and/or had a serious medical condition	17 (14.78)
	VieBP	Child had a behavioural problem/exhibited problematic behaviour	11 (9.57)
Parent	MH	At least one member of family had or were being treated for mental health issues	84 (73.04)
	PO	At least one of the parents had one or more previous offences	49 (42.61)
	DU	At least one of the parents used illegal drugs	44 (38.26)
	HoCM	At least one of the parents experienced maltreatment as a child	39 (33.91)
	Young	At least one of the parents were younger than 20 when child was born	36 (31.30)
	AA	At least one of the parents abused alcohol	33 (28.70)
	FP	At least one of the parents were in debt or had other significant financial pressures	32 (27.83)
Family	DA	There were incidents of domestic abuse between family members	72 (62.61)
	HI	The family frequently moved home or experienced bouts of homelessness	40 (34.78)
	LoSS	At least one of the family members revealed feeling isolated or lacking social support	37 (32.17)
	PLC	The conditions of the home were poor/poor hygiene of children was noted	34 (29.57)
	TwoSib	The victim had more than two siblings	24 (20.87)

## Results

Fifteen risk factors for ICM were investigated using an SSA analysis to see if they could be placed into Child, Parent and Family themes. Figure 1 shows vectors 1 and 2 of a 3D SSA and revealed a coefficient of alienation of 0.09, demonstrating a good fit of the data to the proposed model. Three distinct themes are shown: Child to the left, Parent to the right and Family in the middle, see Figure 1. Each point relates to a specific risk factor as defined in Table 4. "Mental Health" and "Domestic Abuse" were consistently featured in the majority of cases. Conversely, all the variables in the Child theme were the lowest in frequency, particularly "Victim Behavioural Problems" appearing in less than 10% of cases.



Figure 1: Smallest space analysis



### *Child*

To the left of Figure 1 is the Child theme which encompasses characteristics displayed by the child. "Low Birth Weight/Prematurity" with "Disability/Serious Medical Condition" may suggest the child was born with features that instigate negative feelings, aggression or apathy from parents. "Victim Behavioural Problems" may be learned behaviours from the child to cope with the ICM or, again may result in aggression from parents. The K-R 20 coefficient for this theme was low at .07. This could be due to the theme only having three variables of which were the lowest prevailing, each appearing in less than 16% of the cases

### *Parent*

To the right is the Parent theme. This theme is made up of "Mental Health", "Previous Offences", "Drug Use", "Alcohol Use", "History of Child Maltreatment", "Young Parents", and "Financial Pressures". "Mental Health" was the most prevalent risk factor in this theme with "Financial Pressures" being the lowest at 27.83%. These seven risk factors denote behaviours displayed by the parents that contribute to ICM. The K-R 20 coefficient was the highest at .64, suggesting a meaningful theme. This means that the factors highly correlated with each other and these risk factors frequently occurred together in cases.

## *Family*

In the middle is the Family theme. This theme denotes a collection of risk factors displayed by the whole family, not just the parents, or the child. It is made up of "Domestic Abuse", "House Instability", Lack of Social Support", "Poor Living Conditions/Hygiene" and "More than Two Siblings". "Domestic Abuse" was the highest occurring factor and "More than Two Siblings" was the lowest occurring, appearing in only 20.87% of cases. The K-R 20 coefficient was .48 suggesting a better fit than the Child theme, but less so than the Parent theme.

## *Dominant Theme Analysis*

The SCRs were further investigated to explore the applicability of a dominant theme within the cases. To do this, cases were individually analysed to find the percentage of the risk factors occurring in each theme, procuring three percentages. Dominant themes were assigned depending on the relationship between the percentages based on previous research (Almond, Canter & Salfati, 2006). If one percentage was more than the total of the other two theme's percentage, then that was considered the dominant theme. However, if two percentages were similar in size and more than three times the size of the third percentage, then this case was considered to be a hybrid of two themes. When this system was not applicable due to percentages being too high or too low, the cases were deemed to be unclassifiable.

It was found that the Parent theme was the most frequent dominant theme, accounting for 40 cases, closely followed by Family in 32 cases. Lastly Child was the dominant theme in 11 cases, however, the Parent/Family hybrid theme was more frequent than this, accounting for 23 cases. Only one case was assigned as a Child-Hybrid, whereas, eight cases (6.96%) were Unclassified. Therefore, the themes of Parent, Family and Parent/Family Hybrid were the most frequent dominant themes within SCRs.

## **Discussion**

Ecological systems theory describes the child as being a centre of systems, impacting upon their development (Bronfenbrenner, 1979). The present study used an SSA that revealed the 15 risk factors from the literature could be statistically placed into Child, Parent and Family themes, as hypothesised. The second hypothesis suggesting that these themes could be used to classify the individual cases was also supported, with 72.17% of cases classified into ecological themes. This implies that the model from the SSA correctly represents cases of ICM in this sample.

An increase in risk factors is associated with an increase in risk (Brown et al., 1998), suggesting that grouping them into themes may be more parsimonious. A variety of researchers and policy makers have used ecological theory to describe ICM (Brown et al., 1998; Garbarino, 1977; Haynes et al., 2015; Radford et al., 2011; Thornberry et al., 2014). Physical, emotional and sexual abuse (Jutte et al., 2015) as well as neglect were included in the definition of "child maltreatment", as seen in other studies (Li et al., 2011), as it is rare that they occur in isolation (Hoertel et al., 2015). Upon examination of the SCRs, 34.78% of cases were assigned to the dominant Parent theme where the risk factors were indicative of parental characteristics. The literature supports the current study with the placement of the majority of Parental risk factors. Mental illness was the most frequent risk factor within this theme and, alongside young parental age, has been consistently been defined as a parental risk factor for ICM (Sidebotham & Golding, 2001; Dubowitz et al., 2011; Bartlett et al., 2014). Similarly, the DfE (2016) found domestic violence and mental illness the most common factors

found in the SCRs, each being present in over 60% of the cases. This suggests that they are prevailing factors in cases of ICM and must be seen as influential risk factors. Domestic violence has been suggested to be part of a violent family syndrome appearing alongside ICM (Schwartz et al., 2014). Also, mental illness has been shown to impact upon (Whitson et al., 2011) and mediate (Plant et al., 2013) other risk factors. Being a young parent may increase the risk of ICM posed by a history of maltreatment (Geiger & Schelbe, 2014) and may lead to the development of depression (Plant et al., 2013). Financial pressures (Sidebotham et al., 2002; Hornor, 2014) have also been found to mediate other risk factors. Sidebotham and Heron (2006) found that some parental risk factors lost significance when social economic status was controlled for, alluding to a relationship between them. From this it can be seen that these risk factors do have a cumulative impact upon each other.

Rates of parental maltreatment (Abramovaitis et al., 2015) may be effected by drug use. Sidebotham and Golding (2001) and Thornberry and Henry (2013) found differing rates of parental maltreatment. This may be due to the sample used by Thornberry and Henry having an overrepresentation of drug users. Drug abuse and prior criminal activity have also been linked to ICM (Cavanagh et al., 2007; Laslett et al., 2012). This study also places parental drug use, alcohol abuse and previous offences within the Parental theme. This has been supported by other studies such as Dubowitz et al. (2011). The current study suggested that, like Stith et al. (2009), parental history of maltreatment is a parental risk factor. However, other studies are not in agreement on whether it does increase risk and if it is a parental risk factor. Bartlett et al. (2014) found that this risk factor was better suited as Family risk factor rather than Parent, whereas Sidebotham and Golding (2001) found that when accounting for other variables, significance was lost. However, both of these studies focused upon the mother when looking at parental risk factors creating a considerable gender bias within their results. In contrast, the current study included all parental figures when looking at this particular risk factor. The World Health Organisation (2014) agreed with the placement of history of child maltreatment, alcohol and drug abuse, previous offences and financial pressures. However, the fact sheet developed by the organisation stated that mental health was a Family risk factor. This may be due to the effect of mental health upon other family members. Then again, it could be said that other factors, such as financial pressures, could also affect other family members and therefore should be within the Family theme.

The Family theme was dominant within 27.83% of the cases and denote factors impacting the child their surrounding family members. A large number of siblings have been associated with a higher risk of ICM (Zuravin, 1991) and has been placed in the Family theme by numerous other studies (Stith et al., 2009; Dubowitz et al., 2011; Haynes et al., 2015). On the other hand, inadequate living conditions and poor hygiene (Keene et al., 2015) have been shown to be risk factors of ICM but have not been ecologically placed by previous research. Unlike the present study, Stith et al. (2009) allocated social support within the Parent theme. Their definition was similar to the one used by the current study, however, Stith et al.'s only included parents, as opposed to all family members feeling unsupported. This could explain the discrepancy. On the other hand, Sidebotham et al. (2002) suggested that the lack of social networks and high house mobility (McGuinness & Schneider, 2007) were social factors contributing to ICM. Despite not calling them a Family risk factor, it does support that these risk factors do co-occur together.

Despite the inconsistencies seen in other studies (Li et al., 2011), low birth weight and prematurity were both found to be risk factors for ICM in the Child theme along with child disabilities (Mueller-Johnson et al., 2014), chronic illness (Jaudes & Mackey-Bilaver, 2008) and behavioural problems (Hurme et al., 2008; McEiroy & Rodriguez, 2008). This was supported by other studies focusing on an ecological approach (Stith et al., 2009; Dubowitz et al., 2011; Bartlett et al., 2014; Thornberry et al., 2014). This theme accounted for 9.57% of cases within this data making it

the lowest prevailing theme. It also had the lowest validity and the risk factors were the most infrequent. This could have been caused by the authors who contribute to SCRs seeing these risk factors as irrelevant to learning. For example, the possible prematurity of victims who were older at the time of maltreatment could have seemed irrelevant to the case and the onset of the maltreatment. Also, including cases of SUDI, as seen in Brandon et al. (2014), may have increased the frequency of the Child risk factors.

A surprising finding from this study was the popularity of a Parent/Family hybrid theme. This theme accounted for 20% of cases and was more frequent than the Child theme, perhaps due to risk factors pertaining to the parent and family were more likely to be recorded in the SCRs. The author of the SCRs may see risk factors exhibited by the parents and the family setting of the child to be helpful in learning what had caused the maltreatment. Alternatively, parent and family characteristics may just appear together frequently. Social support has been shown to lower depression scores in young parents (Whitson et al., 2011) as well as mediate financial stress (Li et al., 2011). Also, the effect of family size was confounded by poverty (Dubowitz et al., 2011), but could have been impacted by the effect of race upon access to financial support (Puntam-Horstein et al., 2013). Other research has linked Parent and Family risk factors together. McManus et al. (2015), using a similar methodology, found components in which risk factors associated from different ecological systems co-occurred together to make their own risk conditions. For example, drug use and domestic violence were in a component together. Also, mental health, substance abuse and multiple children were linked as "parental stressors". Stress is a frequent subject within ICM research, as seen in Ha et al. (2015), and could be the link between Parent and Family risk factors. Furthermore, when risk compiles across these systems, the possibility of maltreatment increases (Thornberry et al., 2014). Therefore, cases in which there are risk factors in two or more systems may be of a higher risk and so explains the prevalence of the Parent/Family hybrid theme in the data. Alternatively, ecological theory may not be the most parsimonious approach in investigating ICM. Stith et al. (2009) found that the strongest risk factor in their meta-analytic study was the parent-child relationship, although, results were linked to ecological theory. Parents' attitudes of how the child should behave have also been shown to be important (Cavanagh et al., 2007; Lewin & Herron, 2007). Similarly, McEiroy and Rodriguez (2008) suggested a cognitive model in which cognitive schema lead parents to use aggression towards their child.

Predictive risk modelling has its disadvantages as identifying families before an action has taken place could vilify families (De Haan & Connolly, 2014). Also, there may be large differences between the forms of maltreatment which may have been lost by current study looking at ICM as a whole (Bartlett et al., 2014). The combination of all types of maltreatment could be disadvantageous as some risk factors may predict specific forms of maltreatment, as seen in Seto et al. (2015). On the other hand, combining maltreatment factors may be an advantageous because some forms of maltreatment can impact others (Hornor. 2014).

### Limitations

Early studies of ICM have been criticised for their methodology (Leventhal, 1981; Kinard, 1994; Thornberry & Henry, 2013). There were methodological issues within this study such as the use of archival data and the focusing on risk factors. Risk factors identified at the time of maltreatment may not be "causative or predictive" of ICM (Dubowitz et al., 2011, p.97), suggesting longitudinal studies should be used. There were also definitional issues (Bertolli et al., 1995) seen with the risk factors. The information within SCRs are broad and in-depth due to the input of various professionals and has been known to impact policy (Sidebotham, 2012). However, SCRs are inconsistently completed and so missing data is frequent (Woodman et al., 2011). Some studies were fully anonymised

whereas others (high profile) named the child and parents, resulting in incomplete demographics. Also, SCRs could possibly only represent the most severe cases of ICM, accounting for the low presence of neglect, which often goes unnoticed or unreported (Lewin & Herron, 2007). Using other forms of data could be more inclusive and correct prevalence estimates (May-Chahal & Cawson, 2005; Radford et al., 2013; Stoltenborgh et al., 2015). Future research could focus on police reports (McManus et al., 2015), or the child protection register (Spencer et al., 2006) as these may have included important data about the cases not seen in SCRs. Another potential research paradigm is to look at the culture/societal aspects of the child, as seen in Sidebotham et al. (2002). This could include the level of poverty, affluence and access to support within the area the child lives.

In conclusion, the results of the SSA suggest that an ecological approach is beneficial when looking at ICM. Within this approach, a child's development can be assessed for harm at each level. However, there was a large overlap between Parent and Family risk factors, resulting in a Parent/Family Hybrid. This may be due to data limitations, or simply because the risk factors greatly coincide. Children are safer when services know what to look for and work together (DfE, 2015) and so effective preventative policies are essential (Gilbert et al., 2012). Overall, the findings from the research could inform future research to aid in early identification of ICM and thus appropriately safeguard children who are at risk of ICM.

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